

## RIVER STAGES AND FLOODS FOR AUGUST 1948

ELMER R. NELSON

River stages during August were mostly above normal in the U. S. except in the New England States, most of the Ohio Basin, and at a few other scattered points. The greatest positive departures were at Van Buren, Ark., and Swan Lake, Miss., where the river stages averaged 9.2 and 9.0 feet above normal, respectively. The greatest negative departure was at Pueblo, Colo., where the upper Arkansas averaged 2.7 feet below normal. Precipitation was very spotty, with approximately two-thirds of the country receiving deficient precipitation. The greatest precipitation (twice normal) occurred in central Virginia, southern Mississippi, and western Washington.

Serious flooding of farm lands occurred along the Spring Branch, northwest of Norfolk, Nebr., and in the lowlands east of Pierce, Nebr., during the second week of August. Excessive rains near Frankfort and Dover, Kans., caused the Black Vermillion Creek to rise to the highest stage of record and the Mission Creek to overflow a considerable amount of farm land. Moderate flooding occurred along the Blue and Republican Rivers in Nebraska and Kansas and along the lower James River in Virginia. Unusually heavy rains over the upper French Broad caused flooding at Asheville, N. C., on the 3d and 4th, with some damage to crops along bottom lands.

*Atlantic Slope drainage.*—Moderately heavy to heavy rains during the first 4 days of the month over the James River Basin in Virginia produced crests 3.5 to 7.7 feet above bank-full stage at and below Bremono Bluff, Va. Very little run-off resulted from the heavy rains on the 1st and 2d over the Maury (3.30 inches), Pedlar (3.01 inches), and the Rivanna (3.13 inches) sub-basins due to the dry soil conditions. The rains on the 3d and 4th were heaviest over the northern tributaries downstream from Balcony Falls, Va., averaging 3.90 inches over the Hardware River and 3.03 inches in the Tye drainage areas. Only minor damage resulted from the overflows.

Heavy rains over the headwaters of the Roanoke River on the 1st (nearly 2 inches), 3d (1.50 inches), and 4th (1.33 inches) produced rapid rises to above bank-full stages at Altavista and Randolph, Va., on the 5th and 6th. The severest flood since the summer of 1941 occurred in Roanoke, Va., due to a torrential rain on the afternoon of the 3d. More than 2 inches of rain occurred in slightly over an hour. Two deaths occurred in the western end of Giles County as a wall of water swept down the hollow between Rich Creek and Glen Lyn, washing away a summer dwelling, a sawmill, and a bridge. Several stores and basements were flooded in the low-lying areas of the business district. Several motorists were marooned, as U. S. Route 11 just east of Elliston, Va., was covered with water to a depth of 3 feet. Lowland crops along the upper Roanoke were damaged from the overflow.

Light flooding occurred in the Santee River System in South Carolina due to the heavy rains that averaged 3.72 inches in the 48-hour period ending on the 4th. No damage of consequence occurred.

Bank-full stages were exceeded on the Savannah River below Augusta, Ga., on the 6th.

*East Gulf of Mexico drainage.*—Minor flooding occurred on the Apalachicola River at Blountstown, Fla., during the first half of the month, due to the heavy rain from the

2d to the 5th which ranged from 2 to more than 6 inches over the upper streams. No damage resulted.

*Missouri Basin.*—Moderate flooding occurred along the Big Blue at Barnston, Nebr., and Randolph, Kans., on the 3d and 4th, due to heavy rain. Excessive rains of 15 or 16 inches near Frankfort, Kans., caused the Black Vermillion Creek to rise to the highest stage in its history, exceeding the crest of 1903 by several inches. The Red Willow Creek, a tributary of the Republican, exceeded bank-full stage about 8 miles east of McCook, Nebr., by 2.3 feet on the morning of the 13th. The Republican River exceeded bank-full stage twice during the month at Cambridge, Nebr.

Considerable flooding occurred at Dover, Kans., along Mission Creek due to excessive local rain (8 to 13 inches).

Most of the damage resulted from the local downpours and very little from the overflowing streams. Two lives were lost on the Black Vermillion Creek.

*Arkansas Basin.*—Minor flooding occurred in the Arkansas River Basin between the 12th and 16th due to the heavy rains which averaged 3.70 inches, over the Caney River basin above Bartlesville, Okla., and 3 inches over the Verdigris below Coffeyville, Kans., during the 72-hour period ending at 7 a. m. on the 14th. Bank-full stage was reached on the Arkansas River at Great Bend, Ark., on the morning of the 12th. No damage resulted from the overflows.

## FLOOD STAGE REPORT FOR AUGUST 1948

River and station	Flood stage	Above flood stages— dates		Crest <sup>1</sup>	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
James:	<i>Feet</i>			<i>Feet</i>	
Bremo Bluff, Va.....	19	4	5	22.8	5
Columbia, Va.....	18	4	5	25.7	5
State Farm, Va.....	12	5	6	16.5	5
Richmond, Va.....	8	5	6	11.5	6
Roanoke:					
Altavista, Va.....	10	5	5	24.6	5
Randolph, Va.....	21	6	6	22.3	6
Saluda: Pelzer, S. C.....	6	4	6	8.0	5
Broad: Blairs, S. C.....	14	4	5	17.2	5
Catawba:					
Catawba, N. C.....	8	5	5	9.4	5
Catawba, S. C.....	11	5	5	12.0	5
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.....	15	{ 1 5	1 15	15.0 18.9	1 8
MISSISSIPPI SYSTEM					
<i>Missouri Basin</i>					
Red Willow: McCook (near), Nebr....	12	13	13	14.3	13
Republican: Cambridge, Nebr.....	5	{ 13 27	13 27	5.6 6.1	13 26-27
Big Blue:					
Barnston, Nebr.....	18	3	3	22.6	3
Randolph, Kans.....	22	4	4	23.1	4
Osage:					
Osceola, Mo.....	22	July 31	4	23.7	2
Warsaw, Mo.....	31	July 26	5	32.8	3
Lakeside (Bagnell Dam), Mo.....	60	July 17	7	61.2	1, 3, 4
<i>Arkansas Basin</i>					
Caney: Bartlesville, Okla.....	13	15	16	16.6	15
Verdigris: Inola, Okla.....	41.5	15	16	42.6	16
Arkansas: Great Bend, Kans.....	8	12	15	9.6	15

<sup>1</sup> Provisional.